Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

50. (Previously Presented) A method for reducing an amount of bio-available phosphorus in an organic waste product, liquid wastewater or soil, comprising the step of adding to the organic waste product, liquid wastewater or soil a composition or mixture comprising a byproduct from a titanium dioxide manufacturing process in an amount sufficient to immobilize some or all of the phosphorus present in the organic waste product, liquid wastewater or soil, wherein the byproduct comprises about 2-10% by weight calcium, about 10-20% by weight iron, and about 8% by weight titanium dioxide.

51. (Previously Presented) The method of Claim 50, wherein the byproduct comprises about 5% by weight calcium and about 15% by weight iron.

52. (Previously Presented) The method of Claim 50, wherein said organic waste product is animal waste.

53. (Previously Presented) The method of Claim 52, wherein said animal waste is poultry litter.

54. (Previously Presented) The method of Claim 50, wherein said byproduct is

secondary waste acid neutralization gypsum or filter cake.

55. (Previously Presented) A method for reducing an amount of bio-available phosphorus in an organic waste product, liquid wastewater or soil, comprising the step of adding to the organic waste product, liquid wastewater or soil a composition or mixture comprising a byproduct from a titanium dioxide manufacturing process in an amount sufficient to immobilize some or all of the phosphorus present in the organic waste product, liquid wastewater or soil, wherein the byproduct comprises about 15-50% by weight calcium, about 10-20% by weight iron, and about 2% by weight titanium dioxide.

56. (Previously Presented) The method of Claim 55, wherein the byproduct comprises about 23% by weight calcium and about 11% by weight iron.

57. (Previously Presented) The method of Claim 55, wherein said organic waste product is animal waste.

58. (Previously Presented) The method of Claim 57, wherein said animal waste is poultry litter.

59. (Previously Presented) The method of Claim 55, wherein said byproduct is secondary waste acid neutralization gypsum or filter cake.

Claims 60-71 (Cancelled).

72. (Previously Presented) A method for controlling the growth of an organism in a body of water to which surface-, subsurface-, or ground-water flows, by reducing an amount of soluble phosphorus in a soil from which said water originates, comprising the step of amending the soil to include a mixture comprising a byproduct in an amount sufficient to immobilize some or all of the phosphorus present in the soil; said by-product comprising calcium, iron and titanium dioxide.

73. (Previously Presented) The method of Claim 72, wherein said byproduct is obtained by manufacturing titanium dioxide by chemically processing a titanium dioxide starting material and obtaining said product containing calcium, iron and titanium dioxide.

74. (Previously Presented) The method of Claim 73, wherein the starting material is ore, coke, or slag.

75. (Previously Presented) The method of Claim 73, wherein said chemical process is chlorine based.

76. (Previously Presented) The method of Claim 73, wherein said byproduct comprises about 2-10% by weight calcium, about 10-20% by weight iron, and about 8% by weight titanium dioxide.

77. (Previously Presented) The method of claim 76, wherein the byproduct comprises

about 5% by weight calcium and about 15% by weight iron.

78. (Previously Presented) The method of Claim 77, wherein said chemical process is sulfuric acid based.

79. (Previously Presented) The method of Claim 78, wherein the byproduct comprises about 15-50% by weight calcium, about 10-20% by weight iron, and about 2% by weight titanium dioxide.

80. (Previously Presented) The method of Claim 79, wherein the byproduct comprises about 23% by weight calcium and about 11% by weight iron.

81. (Previously Presented) The method of Claim 72, wherein said organism is algae.

82. (Previously Presented) The method of Claim 72, wherein said organism is bacteria.

83. (Previously Presented) The method of Claim 82, wherein said bacteria is *Pfiesteria.*

84. (Previously Presented) The method of Claim 83, wherein said bacteria is *Pfiesteria piscidia.*

85. (Previously Presented) A method of controlling eutrophication in a body of water, which comprises the step of reducing an amount of soluble phosphorus flowing into said body of water from surface, subsurface or ground-water flows, by immobilizing some or all of the phosphorus present in a soil through which said surface, subsurface or ground-water flows pass;

said immobilizing being effected by a byproduct comprising calcium, iron and titanium dioxide.

Claims 86-93 (Cancelled).

94. (Previously Presented) A method for reducing an amount of bio-available phosphorus in soil contaminated therewith, comprising the step of adding a by-product comprising calcium, iron and titanium dioxide to the soil in an amount sufficient to immobilize some or all of said bio-available phosphorus in the soil.

95. (Previously Presented) The method of claim 94, wherein the bio-available phosphorus in soil contaminated therewith is from animal waste.

96. (Previously Presented) The method of claim 95, wherein the animal waste is poultry litter.

97. (Previously Presented) The method of claim 96, wherein the poultry litter is chicken litter.

98. (Previously Presented) The method of claim 94, wherein said by-product is secondary waste acid neutralization gypsum or filter cake.

99. (Previously Presented) The method of claim 94, wherein said by-product is produced by a process which comprises the steps of chemically processing a titanium dioxide-

containing starting material.

100. (Previously Presented) The method of claim 94, wherein said by-product comprises about 2-10% by weight calcium, about 10-20% by weight iron, and about 8% by weight titanium dioxide.

101. (Previously Presented) The method of claim 100, wherein said calcium is present in the amount of about 5% by weight, and said iron is present in the amount of about 15% by weight.

102. (Previously Presented) The method of claim 94, wherein said by-product comprises about 15-50% by weight calcium, about 10-20% by weight iron and about 2% by weight titanium dioxide.

103. (Previously Presented) The method of claim 102, wherein said calcium is present in the amount of about 23% by weight, and said iron is present in the amount of about 11% by weight.

104. (Previously Presented) The method of claim 54, wherein said filter cake is iron oxide filter cake.

105. (Previously Presented) The method of claim 98, wherein said filter cake is iron oxide filter cake.

106. (Previously Presented) The method of claim 94, wherein said amount sufficient to immobilize some or all of said bio-available phosphorus in the soil is determined by a process comprising the steps of:

a) reassuring soil phosphorus content by soil testing, and

b) referring to an incubation experiment to determine an amendment amount.

107. (Previously Presented) The method of claim 85, wherein said same or all of the phosphorus in the soil is from animal waste.

108. (Previously Presented) The method of claim 107, wherein said animal waste is poultry litter.

109. (Previously Presented) The method of claim 108, wherein said poultry litter is chicken litter.